This is a research group- and workshop-style seminar designed to help graduate students from diverse disciplines to explore the complex intersections of humans and technology by envisioning, designing, contextualizing, executing, and disseminating an original research project on a sociotechnical system, specifically, computational platforms and media algorithms.

From “fake news” and biased data to discriminatory artificial intelligence and propaganda bots, computational platforms and media algorithms are increasingly core to public debates about how we govern ourselves and thrive. Such systems are not just people or code, but constantly evolving human-machine hybrids whose complexities we are only beginning to appreciate and learn how to hold accountable.

Rigorous understanding and oversight of such hybrids, though, will come from no single discipline. We need skilled system builders reflecting on design choices and data collections, critical analysts appreciating the tradeoffs of technological craftwork, people with domain expertise exploring systems’ practical implications and consequences, ethicists weighing social and cultural implications, engaged participants articulating their experiences navigating such systems, and still more perspectives sure to surface. This workshop is an experiment convening people from diverse disciplines, practices, and perspectives, to build new shared knowledge together.

In interdisciplinary teams, students will use a variety of theories and methods to answer three questions about platforms and/or algorithms of their choice: what are they, why do they matter, how could they improve? Such descriptions, interpretations, and extensions require mixing knowledge at disciplinary intersections—engineering, systems science, sociopolitical theory, ethics, design, sociology, business, law, policy—letting students learn from and with each other about the power and promise of sociotechnical dynamics that driving new digital infrastructures.

Students need not be deeply knowledgeable about this domain, indeed, some will arrive with identified research interests (or even work in progress), while others will be early in their journey — curious but far from clear on a particular topic or method of inquiry. Students are expected to work with one another and also invited to collaborate with faculty to build out an ongoing research program. We also have the opportunity to draw upon a range of leading scholars in this journey by inviting guests from USC and beyond to share their work, offer feedback and even collaborate.
Outputs may include: team-authored submissions to conferences or journals relevant to the student’s field or career goals; a class exhibition; organized public events; popular press articles, podcasts or websites for general audiences; policy recommendations; case studies; teaching cases; speculative designs; or any other product that addresses the three questions.

**Learning Objectives**
By the end of the course, students should be able to:

- articulate interdisciplinary perspectives on computational platforms, media algorithms, or artificial intelligences;
- trace and challenge normative and ethical tensions underpinning these perspectives;
- offer conceptually grounded critiques of sociotechnical systems and emerging debates;
- discuss tradeoffs of different methodologies for researching and publicly accounting for sociotechnical systems;
- present an original research project related to computational platforms, media algorithms, or artificial intelligences;
- sustain an engaging cocktail party conversation on their work and this area of inquiry that is substantive and accessible to non-experts.

**MODE, EXPECTATIONS & EVALUATION**
We undertake this work in a spirit of generosity, curiosity and serious fun. Good interdisciplinary work is challenging – each participant brings a different perspective, language, intellectual touchpoints, and we need to patiently appreciate and build upon those differences to get the most from them.

The course is driven by student projects. It is a space for students to develop work, practice methodologies, speak to new audiences, and collaborate with disciplines outside their own. To this end, we really mean this to be a workshop where students develop projects. Talking about grades is a bit weird in a doctoral workshop, but these are our expectations and their relative weightings.

**Weekly Memos & Discussion (20%)**
Each week, you will write a very short prompt of approximately 350-500 words that engages with at least two of the week’s readings, and ends in at least one question to anchor that week’s discussion. You have considerable freedom: you can pose questions you had as you read; contrast readings; connect themes you saw emerging among texts; critique authors’ arguments; situate texts in relation to networked technologies. The goal is to reflect upon the readings and share reflections with your classmates so you arrive to class ready to participate. We won’t be grading the memos, but offer this rubric to give you a sense of expectations:

- ‘check-plus’ = thoughtful and sophisticated analysis that moves a conversation forward
- ‘check’ = a good effort that contributes to class, but could have been stronger
- ‘minus’ = not quite up to expectations, let’s talk about how to improve

One or two times during the semester, you’ll lead the discussion of readings. You can do this individually or in pairs, your choice.

Please share your memos with the entire class by 7pm of the Monday night before Tuesday’s class – and, if you’re leading that week’s discussion, you should read your colleagues’ memos before class.

**Project (80%)**
Either individually or in groups (your choice), you’ll develop an original project. You’ll do this iteratively, progressing through guideposts as the semester progresses:

- **Project Pitch & Weekly Check-ins (15% | every week starting September 5).** Every week we’ll start the meeting with short updates on everyone’s projects. These are not formal presentations, but you should come ready to talk about your progress, challenges you’re encountering, help you’d like.
- **Progress Report (10% | October 24).** A more formal version weekly update; you’ll take stock of your project’s status, realistically assess what you can accomplish by the end of the semester, identify challenges and ameliorating strategies, clearly state your deliverables.
- **Final Presentation (15% | November 28):** a 15-20 minute presentation of your project similar to the kind of talk you’d give at a conference.
- **Peer Feedback (10% | November 28):** in addition to ongoing feedback in weekly check-ins, you will offer a constructive verbal or written response to a progress report and final presentation.
- **Final Product (30% | December 13):** delivery of your final product in agreed-upon format (e.g., a mix of scholarly writing, public-facing articles, teaching cases, multimedia products).

We will spend the semester talking these through but, from first pitch to final product, these are the **kinds of questions you should be considering** as you develop your project:

- How is your work interdisciplinary? Without belaboring the point, are there meaningful differences between inter-/cross-/anti-disciplinary perspectives? How and why are you connecting to communities of research and practice?
- What question are you asking? What are you explaining, arguing, describing, testing, comparing? What variance, change, event, or relationships are you working with?
- What's at stake in your work? Why does it matter? Who's your audience for it? Who would you like to be in conversation with or influence, and how does your intervention (account, design, recommendation, convening) advance this goal?
- Why are you the right person to do this work? What do you want to learn for yourself by doing this work? How would you like this work to change you? What would it mean to do this work alone or with someone from another discipline or perspective?
- What's needed for this project to be successful? What people, concepts, materials, skills, access do you need? How are you going to get what you need and what are your backup plans if something falls through?
- What would your dream outcome of this work be?
- How is your work both conceptually sophisticated and empirically grounded? That is, what ideas and phenomena are you working with, and how are you shifting back and forth between ideas about the world and engagements with it?
- What kinds of evidence enter your work? Why is this the right evidence for your question, claim, or argument? Where are you going to get this evidence? What challenges to it might be raised, and how will you address those challenges? How will you combine different kinds of evidence, and what are the risks and opportunities of doing so?
- What ethical issues arise in the design and execution of your project? What community of peers or critics will help you work through these issues? What compromises is your project making and why are they defensible?
- What knowledge, connections, or contributions does your project generate? Your work doesn’t have to be radically novel or filling some “gap” in the literature, but it should be in conversation with some debate and you should be able to articulate the contribution you’re making. Indeed, you shouldn’t become paralyzed by looking
for the “perfect” contribution, but you should be able to say how your work enriches some ongoing conversation.

- What form(s) will your project take, and why? How are your project’s forms related to its aims, the conversations you’re contributing to, and the communities you’re in conversation with?
- What do you see as likely medium or longer developments of your research domain? Which future questions in this area interest you?

## SCHEDULE & MATERIALS

Depending on student interests or guest visitor availability, this schedule and set of topics will shift.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/22</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>8/29</td>
<td>Designing Interdisciplinary Sociotechnical Research</td>
<td>Present 3 candidate projects</td>
</tr>
<tr>
<td>9/5</td>
<td>Media Platforms</td>
<td>Project Pitch</td>
</tr>
<tr>
<td>9/12</td>
<td>Computational Algorithms</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>9/19</td>
<td>Ethics of Media Platforms &amp; Computational Algorithms</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>9/26</td>
<td>Content Moderation</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>10/3</td>
<td>News, Facts &amp; Computational Propaganda</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>10/10</td>
<td>Domesticity &amp; The Home</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>10/17</td>
<td>Bodies &amp; Self-Hacking</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>10/24</td>
<td>The U.S. Census</td>
<td>Project Progress Report</td>
</tr>
<tr>
<td>10/31</td>
<td>Cities &amp; Urban Computation</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>11/7</td>
<td>Digital Ownership</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>11/14</td>
<td>Labor &amp; Work</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>11/21</td>
<td>Criminal Justice</td>
<td>Project Check-in</td>
</tr>
<tr>
<td>11/28</td>
<td>Final Presentations (final products due December 13)</td>
<td></td>
</tr>
</tbody>
</table>

In addition to this schedule, we’re considering organizing a parallel “book club” in which a larger group meets 2-3 times during the semester to discuss some subset of:

DO NOT BE SCARED OFF BY THE VOLUME OF MATERIALS LISTED BELOW. These are not all “required” readings and we will pick 2-3 selections for each week. They are a general and somewhat idiosyncratic bibliography, meant as starting points for student projects. They will shift as the semester progresses.

We will also share and add to a class Zotero folder of popular press articles. Students are highly encouraged to add to this folder materials they find relevant, bring materials from their “home” disciplines and other research communities, and anything they find while developing their projects.

The “Critical Algorithm Studies Reading List,” by Tarleton Gillespie and Nick Seaver, also contains excellent references: [https://socialmediacollective.org/reading-lists/critical-algorithm-studies/](https://socialmediacollective.org/reading-lists/critical-algorithm-studies/)

### Week #1, August 22 :: Introduction

### Week #2, August 29 :: Designing Interdisciplinary Sociotechnical Research

Discussion of what makes a good interdisciplinary project, methods used to make accounts of sociotechnical systems, survey of approaches used to study media platforms and computational algorithms. Students discuss 3 sociotechnical systems they are interested in studying, and propose ways of creating accounts or making interventions.

**Foundations (required)**


Seaver, Nick. (DRAFT). *Algorithms as culture: Some tactics for the ethnography of algorithmic systems*.


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss them.

**Background (recommended, not required)**


Seaver, Nick. (2015). The nice thing about context is that everyone has it. Media, Culture & Society, 37(7), 1101-1109. doi:10.1177/0163443715594102


Week #3, September 5 :: Media Platforms

**Foundations (required)**

Gillespie, Tarleton. (2017). Governance of and by platforms. In Jean Burgess, Thomas Poell, & Alice Marwick (Eds.), SAGE Handbook of Social Media. London, UK: SAGE. → *If you’re interested in this chapter, Tarleton Gillespie has agreed to share a draft of his forthcoming book* Custodians of the Internet (2018, Yale University Press) *with anyone in the class. The book is, in many ways, an extension of this chapter. It is not yet ready for wide distribution or public posting, but please email me if you’d like a copy.*


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

**Background (recommended, not required)**


Week #4, September 12 :: Computational Algorithms

**Foundations (required)**

Applications (required)

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

Background (recommended, not required)


**Week #5, September 19 :: Ethics of Media Platforms & Computational Algorithms**

**Perspectives on Studying & Designing for Accountability, Transparency, Harm-Reduction, Fairness**

**Foundations (required)**


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

**Background (recommended, not required)**


Week #6, September 26 :: Content Moderation

Foundations (required)


Applications (required)

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

Background (recommended, not required)


Week #7, October 3 :: News, Facts, & Computational Propaganda

Foundations (required)

Selected report from OII “Computational Propaganda” group (TBD)


Applications (required)

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

Background (recommended, not required)


Hoaxy: Visualize the spread of claims and fact checking [https://hoaxy.iuni.iu.edu/](https://hoaxy.iuni.iu.edu/)


Week #8, October 10 :: Domesticity & The Home

**Foundations (required)**


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

**Background (recommended, not required)**


Week #9, October 17 :: Bodies & Self-Hacking

Foundations (required)


Applications (required)

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

Background (recommended, not required)


---

**Week #10, October 24 :: The U.S. Census**

**Foundations (required)**


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

**Background (recommended, not required)**

+ more to come

---

**Week #9, October 31 :: Cities & Urban Computation**

**Foundations (required)**


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss them.

**Background (recommended, not required)**


---

**Week #12, November 7 :: Digital Ownership**

**Foundations (required)**


**Applications (required)**

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss.

**Background (recommended, not required)**

+ more to come

---

**Week #13, November 14 :: Labor & Work**

**Foundations (required)**


Applications (required)

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss them.

Background (recommended, not required)


Week #14, November 22 :: Criminal Justice: Policing & Sentencing

Foundations (required)


Applications (required)

Choose 2 examples from the class Zotero folder, or bring in 2 of your own examples, and come to class ready to discuss them.

Background (recommended, not required)


---

### Week #15, November 29 :: Project Presentations & Course Wrap-Up

**Final Projects Due Friday, December 13th**

---

### ADMIN & LOGISTICS

**Expectations & Norms**

Students are expected to be present and focused in each meeting; a course like this works best when students engage with the readings and each other thoughtfully, professionally, and attentively. See this as a space to develop your own work, practice critiquing ideas, and help your fellow students develop their work. Please use computers for class business only, silence phones before each meeting, and refrain from back-channel or side conversations. Your participation is crucial. Please speak up, take risks, and experiment with taking new perspectives you wouldn’t normally adopt. It is also critically important that you do each week’s readings and that you meet class deadlines – a course like this moves too fast for you to fall behind or come to class unprepared.

**Statement for Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. Website for DSP and contact information: (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX) ability@usc.edu.

**Statement on Academic Integrity**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. *SCampus* ([http://scampus.usc.edu/](http://scampus.usc.edu/)), the Student Guidebook, contains the University Student Conduct Code (see University Governance, Section 11.00), while the recommended sanctions are located in Appendix A.

**Emergency Preparedness / Course Continuity in a Crisis**

In case of a declared emergency if travel to campus is not feasible, USC executive leadership will announce an electronic way for instructors to teach students in their residence halls or homes using a combination of Blackboard,
teleconferencing, and other technologies. See the university’s site on Campus Safety and Emergency Preparedness: http://preparedness.usc.edu/

Stress Management
Students are under a lot of pressure. If you start to feel overwhelmed, it is important that you reach out for help. A good place to start is the USC Student Counseling Services office at 213-740-7711. The service is confidential, and there is no charge.

FAQs

Q: Can I miss class?
A: Please don’t. A class like this really depends upon people being present, prepared, and engaged. But if you’re truly ill or have a solid reason to be absent, please send us an email letting us know that you’re missing class.

Q: Can I submit an assignment late?
A: Please don’t. It’s a bit weird to talk about grades in a doctoral workshop, especially one that’s so experimental, but we have to keep grades and it’s most equitable if everyone has the same amount of time to work on submissions. It’s also critical to the class culture that we have a steady stream of material to consider together, to give feedback on, and help shape. If you fall behind on submitting work it makes class harder to keep on track, and it makes it harder to give you timely feedback. (We’ll subtract a partial letter grade for each day a submission is late. E.g., a B-plus paper that is one day late will be given a B; an A paper that is one day late will be given an A-minus.) Of course, if you have a valid medical or personal emergency please email us as soon as possible and we’ll work something out.

Q: When can I meet with you?
A: See the front page for our office hours, but email us if you can’t make these times and we’ll make another plan.

Q: Can I use this workshop to work on a dissertation chapter or prospectus?
A: Yes! The point of the workshop is to help you create or make progress on a project that’s meaningful to you, that helps you develop a new skill, learn a new area, or build new relationships (or all of the above). It’s a place to try out questions, explore field sites, and practice methods. You are always encouraged to connect to an existing project, but you should make sure that you’re using this seminar to do substantially new work, not simply revise something you’ve already done for another class or your dissertation.